

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Previously Presented) A packet transmission method in a mobile communications network system for routing a packet using an IP address between a user in a mobile communications network system and a user inside or outside the mobile communications network system, said packet transmission method comprising the steps of:

generating an IP address of the user in the mobile communications network system including a location address which identifies an access link termination node for which the user has carried out location registration and a user identifier which identifies the user;

storing the generated IP address into a packet transmitted and/or received by the user in the mobile communications network system; and

routing the packet in accordance with the location address and the user identifier in the IP address.

Claim 2. (Original) The packet transmission method as claimed in claim 1, wherein the location address has a hierarchical structure.

Claim 3. (Original) The packet transmission method as claimed in claim 2, wherein the hierarchical structure comprises at least a network identifier indicating a subdivided

network of the mobile communications network, and a node identifier provided in connection with a termination node of an access link in the network.

Claim 4. (Original) The packet transmission method as claimed in claim 3, further comprising the steps of:

routing the packet to the network in accordance with the network identifier;
routing the packet to the termination node in accordance with the node identifier; and
transmitting the packet from the termination node by selecting an access link of a related mobile communications network in accordance with the user identifier.

Claim 5. (Original) The packet transmission method as claimed in claim 3, further comprising the steps of:

routing the packet to the termination node, referring to the location address in its entirety;
and
transmitting the packet from the termination node by selecting an access link of a related mobile communications network in accordance with the user identifier.

Claim 6. (Original) The packet transmission method as claimed in claim 1, wherein at least the location address constituting the IP address is transmitted to the user in the mobile communications network system or to the user inside or outside the mobile communications network system, when an access link is established between the user in the mobile communications network system and the mobile communications network system.

Claim 7. (Original) The packet transmission method as claimed in claim 6, further comprising the steps of:

storing an IP address in connection with a domain name in a database in a domain-name server;

having the domain-name server send the IP address back to the user in the mobile communications network system or to the user inside or outside mobile communications network system in response to an inquiry from the user about the IP address using the domain name; and

having the user that sends the inquiry carry out a packet communication using the IP address sent back.

Claim 8. (Original) The packet transmission method as claimed in claim 7, wherein when the inquiry is sent to the domain-name server, if the access link is not established then an access link is established.

Claim 9. (Previously Presented) The packet transmission method as claimed in claim 7, wherein the domain-name server generates the IP address by acquiring from the mobile communications network system a location address of the user in the mobile communications network system.

Claim 10. (Previously Presented) The packet transmission method as claimed in claim 1, wherein the packet including the IP address is routed in accordance with the IP address with or without encapsulating the packet.

Claims 11-21. (Cancelled).

Claim 22. (Previously Presented) A packet data transmission medium in a mobile communications network system for routing a packet using an IP address between a user in a mobile communications network system and a user inside or outside the mobile communications network system, said packet data transmission medium storing an IP address of the user in the mobile communications network system including a location address which identifies an access link termination node for which the user has carried out location registration and a user identifier which identifies the user into a packet transmitted and/or received by the user.

Claims 23 and 24. (Cancelled).

Claim 25. (Previously Presented) The packet data transmission medium as claimed in claim 22, wherein the packet data transmission medium consists of a packet data signal.

Claim 26. (Previously Presented) A processing method in a mobile communications network system for routing a packet using an IP address between a user in a mobile communications network system and a user inside or outside the mobile communications network system, the processing method comprising the steps of:

generating an IP address of the user in the mobile communications network system including a location address which identifies an access link termination node for which the user

has carried out location registration and a user identifier which identifies the user, when an access link is established between the user and the mobile communications network system;

notifying a domain-name server of the generated IP address; and

storing the notified IP address in connection with a domain name of the user in the mobile communications network system, in a database in the domain-name server.

Claim 27. (Previously Amended) A processing method in a mobile communications network system for routing a packet using an IP address between a user in a mobile communications network system and a user inside or outside the mobile communications network system, the processing method comprising the steps of:

generating, at a domain-name server, an IP address of the user in the mobile communications network system including a location address of the user and a user identifier which identifies the user, by acquiring the location address from an apparatus managing a location address of the user; and

storing the generated IP address in connection with a domain name of the user in the mobile communications network system, in a database in the domain-name server.

Claims 28-30. (Cancelled).

Claim 31. (Previously Presented) The processing method as claimed in claim 27, further comprising the steps of:

referring to a memory managing access link establishment status of a user in the domain-name server, when an inquiry regarding the user is sent to the domain-name server;

commanding an access link termination node in whose area the user is visiting, to establish an access link, if an access link is not established for the user;

establishing, at the access link termination node, an access link between the access link termination node and the user; and

providing, at the access link termination node, the user with the location address, when the access link is established.

Claim 32. (Previously Presented) The processing method as claimed in claim 31, further comprising the step of setting a flag indicating access link establishment in the memory managing access link establishment status, when the access link is established and the IP address is newly registered.

Claim 33 and 34. (Cancelled).
